

# SKYWARN NEWSLETTER

National Weather Service, NOAA

Pittsburgh, PA

Summer 2008

## **FULL SET OF SKYWARN CLASSES ANTICIPATED FOR NEXT SPRING**

We had to once again offer an abbreviated class schedule this spring. However, we should be fully staffed and ready to go for next spring. There may be a class or two offered this fall, however, we are just not sure at this time. The best thing to do is to periodically check our website under SKYWARN. Any formalized classes will be posted.

## **A SLOW START TO THIS YEAR'S SEVERE WEATHER SEASON**

Our severe weather season started very slowly. We only issued one severe thunderstorm warning in April. May was also rather tranquil with 5 severe thunderstorm warnings, one flash flood warning and one flood warning. Six of the seven warnings we issued in May occurred on May 31<sup>st</sup> (a day in which we traditionally have had a good deal of severe weather). We shouldn't feel too bad. June made up for it with about 116 warnings and July about 66 warnings from the NWS office in Pittsburgh. It's hard to say what the remainder of the summer will bring. However, keep in mind that our peak in the severe weather season is June and July. By the time we make it to the last part of July, the frequency of severe weather events starts to decline. This doesn't mean you can't get severe weather, but rather, in a normal year, the amount of severe weather episodes starts to drop. However, flash flooding now becomes more prevalent through the later part of July and into August. The mid-latitudes westerlies (i.e. jet stream) tend to migrate northward into Canada. As a consequence, we have a more tranquil environment relative to higher winds. Unfortunately, when you slow down the winds, you slow down the thunderstorms and flash flooding then becomes more common.

While we have experienced numerous downbursts, we only have three confirmed tornadoes so far this year (1-Preston County, WV, 2-Butler County, PA, 3-Fayette County, PA, Preston County, WV, Garrett County, MD).

## **STORM BASED WARNINGS ARE HERE!**

You may have noticed that we are using a different procedure this summer in our short-fused warnings. Instead of warning each particular county, we are warning for the area under the greatest threat of severe weather (a polygon). In other words, we have transitioned from county-centric warnings, to polygon or storm-based warnings. This results in much less area that has to be warned in any one particular county. However, on the other hand, there are many more counties (or parts of counties) that are contained in the warning. Several websites (including our own RIDGE radar site) display the warned polygons. Check it out to see the individual warned boxes. You can also check out the warned boxes and the storm reports at the bottom of our main page on our website.

## **TV SCREENS BLANKING OUT?....IT'S NOT OUR FAULT!**

We continue to receive periodic complaints from the general public about our warnings "blanking out" their favorite TV shows. Spread the word....IT IS NOT OUR FAULT! The National Weather Service has nothing to do with how the local cable companies choose to display our warnings. Some cable companies have chosen to run crawls across the bottom of the screen. Others companies have chosen to blank out the entire screen for display of the warning. In either case, the National Weather Service is not responsible for which methodology is chosen. We only issue the warnings based on the threat and the local cable companies determine their methodology for dissemination.

## **REMEMBER, WE ARE NOW USING THE EF SCALE**

The National Weather Service (NWS) instituted the EF Scale for tornadoes last year. The EF Scale allows for a more detailed analysis and better correlation between damage and wind speed.

***Original Fujita Scale***

F0 40-72 mph  
F1 73-112 mph  
F2 113-157 mph  
F3 158-206 mph  
F4 207-318 mph  
F5 261-318 mph

***Enhanced Fujita Scale***

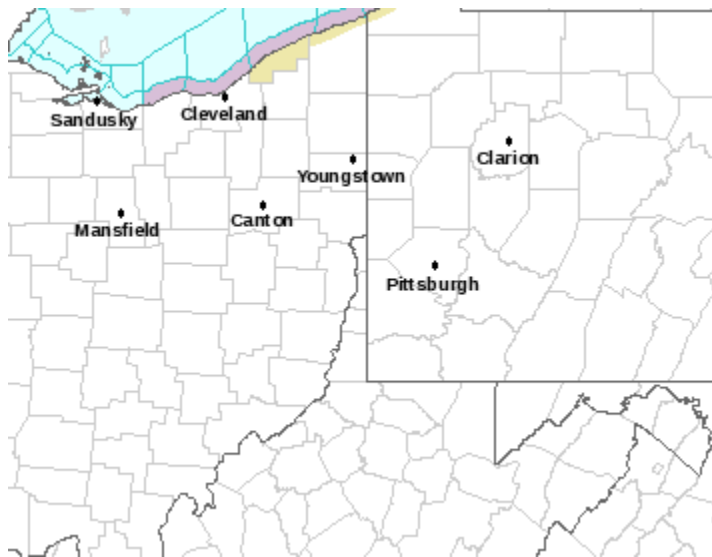
EF0 65-85 mph  
EF1 86-110 mph  
EF2 111-135 mph  
EF3 136-165 mph  
EF4 166-200 mph  
EF5 >200 mph

**HOURLY WEATHER GRAPHS FOR FIRE WEATHER AVAILABLE ON THE INTERNET**

**By: Zaaron Allen, Fire Weather Program Leader, NWS Pittsburgh**

Beginning this summer, NWS Pittsburgh has expanded the production of hourly weather graphs to include fire weather elements. These graphs now include elements for Mixing Height, Transport Winds, Haines Index, Lightning Activity Level, and Ventilation Rate. Below are instructions to generate the hourly graphs.

- 1) From our homepage ([www.weather.gov/pittsburgh](http://www.weather.gov/pittsburgh)), click on the desired location on the map.
- 2) When the next page comes up, go to the bottom of the page and select “Hourly Weather Graph”
- 3) When the graph comes up, you will see several parameters checked, go to the fire weather parameters on the right hand side and check those as well, then hit “Submit”.



**E-SPOTTER AND [PBZ-SKYWARN@NOAA.GOV](mailto:PBZ-SKYWARN@NOAA.GOV)**

Thanks to all those SKYWARNERS that have sent in reports to our office. However, remember, the best way to get us information in real time is to use E-SPOTTER. If you send an e-mail to [PBZ-SYKWARN@NOAA.GOV](mailto:PBZ-SYKWARN@NOAA.GOV), we will probably not see it until several days after the fact. You can register for E-SPOTTER at <http://espotter.weather.gov> and you should be a trained spotter to register. The e-mail site ([PBZ\\_SKYWARN@NOAA.GOV](mailto:PBZ_SKYWARN@NOAA.GOV)) is normally used for SKYWARN administrative purposes. For example, you lost your SKYWARN ID card and you need a new one, or you have changed your address or telephone number and you want us to adjust it in our database. You can also send photos into to [PBZ-SKYWARN@NOAA.GOV](mailto:PBZ-SKYWARN@NOAA.GOV), but let us know your report first by giving us a call. I've received some excellent photos through e-mail and I hope to incorporate some in future SKYWARN classes.

## **PITTSBURGH SKYWARN LIST GROUP**

It's a great way for SKYWARNers in the Pittsburgh CWA to stay connected, share information, discuss the weather, share files and pictures, and more! To join, just visit [http://www.yahogroups.com/groups/skywarn\\_pittsburgh](http://www.yahogroups.com/groups/skywarn_pittsburgh).

## **LONG RANGE FORECASTS**

Check out all the long range forecasts from the Climate Analysis for this Fall and Winter at <http://www.cpc.ncep.noaa.gov>.

## **MORE AND MORE RADAR DATA BECOMING AVAILABLE VIA THE INTERNET**

The amount of radar data making it on the Internet has increased tremendously in the last year or two. In fact, you can now receive the output from numerous algorithms. These algorithms run on the NWS radar computers and we have always been able to access them. However, recently, the data is being provided by various vendors to the world. This is great information. However, you also need to know the limitations of the radar and the algorithms to correctly interpret the information properly. For instance, data such as the maximum storm DBZ, echo top, VIL, probability of severe hail, probability of hail, maximum hail size, tornado vortex signature, mesocyclone, etc are all available through some web sites. It is important to keep in mind that these algorithms are "guidance and not gospel". For example, just because the radar triggers a single TVS, it doesn't necessarily mean that there is a tornado on the ground. It means the radar has detected certain criteria according to the algorithm. However, these are meant as guidance and we have to investigate the true depth and persistence of the rotation to determine the likelihood of a tornado. Another example would be the maximum hail size. Certainly, as the maximum hail size increases, the chances of the storm producing large hail also increase. However, you can not take the actual size given by the algorithm literally. Again, it is provided as guidance and other factors need to be considered. Mesocyclone (or circulation on some web sites) is another algorithm which triggers frequently. It does not mean you definitely have rotation and are about to produce a tornado. The bottom line is that this output is great information which can help everyone track and keep on top of the weather. However, at the same time, caution must be exercised in interpreting the data.

## **FUNNELS OR SCUD CLOUDS?**

Remember, the things we discussed in SKYWARN class. There are so many things which appear to be funnels, but most are not. Be patient and persistent. Look for rotation and possible debris from a touchdown. It is especially difficult to tell the difference in these clouds around sunset. Many pieces of clouds (fractus) and scud can be protruding from the shelf cloud and it becomes very difficult to discern rotation. As we talked about in class, it's not easy. But, it is very important and critical to our warning program.

## **REMEMBER THE THINGS WE WOULD LIKE YOU TO REPORT**

Try to report as soon as possible after observing the event and, remember to be careful! Also, if possible, please give us your location relative to the closest city or town as well as, your county. (For example, Fayette County, about 3 miles southeast of Uniontown).

***SNOWFALL*** - After 2 inches of new snow, and then at 4 inches, 6 inches, and every 3 inches thereafter (e.g., 2, 4, 6, 9, 12, etc.)

***FREEZING RAIN*** - As soon as you observe the occurrence of freezing rain or freezing drizzle, especially if it starts to collect on objects. Call again if the glaze/ice accumulation exceeds 1/4 inch

***THUNDER SNOW*** - Location and time of occurrence

***WIND SPEEDS*** - Report wind speeds greater than 40 mph

***RAINFALL*** - Report any rainfall in excess of 3/4 inch in an hour

**FUNNEL CLOUD** - A "rotating" appendage descending from the base of a cumulonimbus cloud, but not touching the ground. If possible, always look at the area beneath the funnel cloud for flying debris. If flying debris is observed, it is a tornado.

**TORNADO** - Violently rotating column of air descending from a cumulonimbus cloud and touching the ground. Look for flying debris. If possible, report any injuries or fatalities. Tornadoes usually rotate counterclockwise, and this can be a good indicator if what you are observing is a tornado or other meteorological phenomena. However, this is not always true. When in doubt, report!

**HAIL** - Report any size hail. Specify the diameter based on the hail scale (coins)

**FLOODING** - Report any flooding you observe, including basement, road, stream, creek, and ice jam flooding. Report the name of the stream/creek, road number/name (if applicable) and depth

**DAMAGE** - Report all storm-related damage (large branches, fallen trees, structural damage, flood damage, etc.) Even if it is several days after the event.

## **SOME GREAT WEBSITES TO STAY AHEAD OF THE WEATHER**

In case you didn't get these web sites in SKYWARN class:

E-SPOTTER = [espotter.weather.gov](http://espotter.weather.gov)

E-mail = [PBZ-Skywarn@noaa.gov](mailto:PBZ-Skywarn@noaa.gov)

NWS Pittsburgh = [www.erh.noaa.gov/er/pbz](http://www.erh.noaa.gov/er/pbz)

NOAA Weather Radio = [www.nws.noaa.gov/nwr](http://www.nws.noaa.gov/nwr)

Storm Prediction Center = [www.spc.noaa.gov](http://www.spc.noaa.gov)

Heavy Precipitation Center = [www.hpc.ncep.noaa.gov](http://www.hpc.ncep.noaa.gov)

NWS/NOAA Online Weather School = [www.srh.noaa.gov/jetstream](http://www.srh.noaa.gov/jetstream)

AHPS River Flood monitoring = [www.weather.gov/ahps](http://www.weather.gov/ahps)

Basic SKYWARN brochure (for downloading) = [www.nws.noaa.gov/om/brochures/basicspot.pdf](http://www.nws.noaa.gov/om/brochures/basicspot.pdf)

Advanced SKYWARN brochure (for downloading) = [www.nws.noaa.gov/om/brochures/advspg.pdf](http://www.nws.noaa.gov/om/brochures/advspg.pdf)

Also, remember that we have a 5-year recertification. We would like all of our SKYWARNers to attend a class at least once every 5 years.

## **GREAT REPORT**

From Lori (SKYWARNER in Salem Columbiana County (07/26/08)). Excellent report and great photo.



## **AMATEUR RADIO NOTES**

We now have our new Kenwood TS-570DG HF radio and antenna. Thanks to all that helped in its installation.

A special thanks to all those amateur radio volunteers that have come into the office this year to staff our radios (WX3PIT). Your time and effort is greatly appreciated. We also want to thank all of the amateur radio operators across our county warning area (western Pennsylvania, northern West Virginia, east-central Ohio and Garrett County, Maryland) for their efforts in supporting and participating in the SKYWARN program.

## **THANKS TO ALL SKYWARNERS!!!**

The National Weather Service would also like to extend a thank you to all of our SKYWARN members. Your reports save lives! We appreciate your participation and support. Please keep up the great work. Remember, if we don't hear from you, we have to go looking for reports. Your information is critical to our mission. Thanks again.